

FINDINGS AND DECISION
of the Director, Division of Oil and Gas
APPROVING THE
NIKOLAEVSK UNIT APPLICATION

**Under Delegation of Authority from the
Commissioner, Department of Natural Resources, State of Alaska**

January 29, 2004

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I. INTRODUCTION AND BACKGROUND

The proposed Nikolaevsk Unit (NU), located on the Kenai Peninsula, includes uplands in the upper drainages of the Chakok River and Clam and Stariski Creeks, southeast of the Deep Creek Unit and northeast of the North Fork Unit, near the unincorporated community of Nikolaevsk.

The proposed unit area encompasses approximately 16,588.63 acres within nine individual oil and gas leases. Approximately 15,811.01 acres, 95.31% of the proposed unit area lies within seven State of Alaska (State) oil and gas leases, and 777.62 acres, 4.69% lies within two oil and gas leases issued by Cook Inlet Region Incorporated (CIRI). Union Oil Company of California (Unocal) is the sole working interest owner and the designated Unit Operator. The NU will be administered by the State under the terms of the Nikolaevsk Unit Agreement (Agreement). The Agreement conforms and modifies all seven State oil and gas leases within the unit area so that the unit operator can explore and develop on a unit-wide basis instead of on a lease-by-lease basis.

A summary of the leases proposed for commitment to the NU follows. The Department of Natural Resources (DNR) issued five of the seven State oil and gas leases following Cook Inlet Sale 85A, which was held on December 18, 1996. The leases were issued on State lease form DOG 9609. These leases are ADL 388199, ADL 388196, ADL 388200, ADL 388198 and ADL 388209. With an effective date of February 1, 1997, the seven-year primary term of these leases expires on January 31, 2004.

The sixth State lease in the proposed unit area was offered in the Cook Inlet Areawide 1999 Oil and Gas Lease Sale, held on April 21, 1999. DNR issued the oil and gas lease ADL 389227, effective February 1, 2000, on State of Alaska lease form number DOG 9069 (rev. 9/99). The seven-year primary lease term of this lease expires on January 31, 2007.

The United States, Department of Interior, Bureau of Land Management (BLM) issued the seventh State lease in the proposed unit area to Unocal on October 1, 1954. BLM transferred the lease to the State on September 30, 1969, and DNR assigned it lease number ADL 2095. The primary term of ADL 2095 is extended indefinitely because a portion of the lease is committed to the North Fork Unit. In 1996, Unocal assigned its interest in this lease to Gas Pro Alaska, and in December 2003, Unocal reacquired 100% of the working interest in a non-unitized portion of ADL 2095, which Unocal proposes for inclusion in the NU.

All seven of the State leases in the proposed unit area retain a 12.5% royalty to the State.

Two CIRI leases are proposed for inclusion in the NU, CIRI leases C-373303 and C-061614. C-373303, originally issued by BLM, later conveyed to the State, and later conveyed to CIRI, retains a 12.5% royalty to CIRI. C-061614, issued by CIRI on December 1, 2003, has a five-year term that expires on November 30, 2008, and retains an 18% royalty to CIRI.

Approval of the Agreement by the State will conform and modify all State lease contracts to be consistent with the Agreement, and extends the lease terms for as long as they are subject to the Agreement.

II. APPLICATION FOR THE FORMATION OF THE NIKOLAEVSK UNIT

Alliance Energy LLC (Alliance) submitted a complete application to form the NU on October 30, 2003, and paid the \$5,000.00 unit application filing fee. Alliance's application included: a proposed NU Agreement; Exhibit A to the agreement, legally describing the proposed unit area, its leases, and ownership interests; Exhibit B to the agreement, a map of the proposed unit; and Exhibit G to the agreement, the proposed Initial Plan of Exploration. In addition, Alliance submitted a NU Operating Agreement; technical data supporting the application; and evidence that Alliance had invited all proper parties to join the application.

The Division of Oil and Gas (Division) issued a public notice of Alliance's unit application on November 2, 2003. On December 8, 2003, the last day of the public comment period, Alliance informed the Division that it was assigning all of its interests in the leases to Unocal. Unocal submitted an amended application (the Application) with a slightly modified proposed unit area and informed the Division that it had acquired 100% working interest ownership from Alliance and all the other lessees in its proposed unit area. The Application that Unocal submitted included a new unit agreement with new exhibits, a new operating agreement, and new technical data to support Unocal's geologic interpretation.

Unocal based the Agreement on the State Only Model Form, dated June 2002 (Model Form) and proposed no modifications. The State proposed and Unocal agreed to three modifications to the Model Form for clarity purposes. The first modification is to add "...or gas that is deemed "waste" by AOGCC" to the last sentence in Article 11.4. The second modification is to add "... all royalty deductions for transportation, including marine, truck, and pipeline transportation..." to the first sentence in Article 12.5, which adds truck costs to the list of allowable transportation deductions. The last modification is the addition of the word "permanent" in two places in Article 12.9. In the past it has been assumed that the amendments referred to in Article 12.9 were meant to be permanent, this modification clarifies this issue.

The Agreement defines the relationship between the unit operator, the working interest owners, and the royalty owners. It describes the rights and responsibilities, in addition to those imposed by state law and the leases, of the unit operator, working interest owners, and royalty owners for exploration and development of the unit area. DNR may approve the Agreement if the available data suggest that the unit area covers all or part of one or more oil or gas reservoirs, or all or part of one or more potential hydrocarbon accumulations that should be developed under an approved unit plan, and the Application meets the other statutory and regulatory criteria.

The Agreement requires that the unit operator, Unocal, file unit plans describing the activities planned for the proposed unit area. Unocal must consider how it can best explore and develop the resources underlying the entire unit area, without regard to internal lease boundaries. Unocal proposed a three-year Unit Plan of Exploration (Initial POE) as a required under 11 AAC 83.341.

Unocal plans to drill an exploratory well in the first year of the Initial POE, acquire new seismic data within the unit area during the second year, and drill a second exploratory well in the third year (Attachment 4).

The Division determined that Alliance's application was complete and published a unit notice in the "*Anchorage Daily News*" and in the "*Peninsula Clarion*" on Sunday, November 2, 2003, and due to amendment of the application, the Division republished the unit notice again on Sunday, December 21, 2003. DNR also posted notices on the State's online public notice web page. The Division provided copies of the public notices to the Kenai Peninsula Borough (KPB), the City of Homer, the Ninilchik Chamber of Commerce, the Ninilchik Traditional Council, the Ninilchik Native Association, the Salamatoff Native Association, CIRI, and other interested parties in compliance with 11 AAC 83.311. The Division also provided public notices to the Alaska Department of Environmental Conservation (DEC), the Alaska Department of Fish and Game (ADF&G), and to post offices, libraries, and radio stations in the area. The original notices invited interested parties and members of the public to submit comments by December 8, 2003, and the amended notices invited interested parties and members of the public to submit comments by January 20, 2004. The Division received four comments during the first public comment period and one comment in the second comment period.

The first comment was received from Glennie Wells on November 26, 2003. Ms. Wells expressed concern about DNR approving surface activity in the area. Her comments were addressed in an email response and later via telephone. Her email was forwarded to the Division's permitting section, which will consider surface impacts when the operator applies for a Plan of Operations permit to conduct surface activity.

The KPB submitted comments on December 2, 2003, and again on January 20, 2004. The KPB had no objection to the formation of the Unit.

The Cook Inlet Keeper requested that DNR review the mitigation measures on older leases, and that any decision keep development away from wetlands and salmon streams, especially in critical habitat areas and to protect the non-hydrocarbon natural resources. They also requested that the Unit Agreement undergo an Alaska Coastal Management Program (ACMP) review. Section III(1), below contains a discussion of the potential environmental impacts of approving the Application.

Lastly, under the original public notice, ConocoPhillips commented that it was concerned about the use of certain seismic information by Alliance. Unocal submitted technical data to support the Application, and this decision is based on Unocal's interpretation and data submissions.

III. DISCUSSION OF DECISION CRITERIA

AS 38.05.180(p) gives DNR the authority to form an oil and gas unit. The Commissioner of DNR (Commissioner) reviews unit applications under AS 38.05.180(p) and 11 AAC 83.301 – 11 AAC 83.395. By memorandum dated September 30, 1999, the Commissioner approved a revision of Department Order 003, and delegated this authority to the Division Director (Director).

The Director will approve the Application upon finding that it will: 1) promote the conservation of all natural resources; 2) promote the prevention of economic and physical waste; and 3) provide for the protection of all parties of interest, including the State in accordance with 11 AAC 83.303(a). Subsection .303(b) sets out six factors that the Director will consider in evaluating the Application. A discussion of the subsection .303(b) criteria, as they apply to the Application, is set out directly below, followed by the Director's findings relevant to the subsection .303(a) finding and the Director's conditional approval of the Application.

1. The Environmental Costs and Benefits of Unitized Exploration or Development

DNR considered environmental issues in the lease sale process, and the State leases contain mitigation measures designed to reduce the environmental impacts of exploration and development of the leased area. The proposed NU area is habitat for a variety of mammals, waterfowl, and fish. Area residents may use this area for subsistence hunting and fishing and it is well known for its recreational values. Oil and gas activity in the proposed unit area may affect some wildlife habitat. Mitigation measures include seasonal restrictions on specific activities to reduce the impact on fish, wildlife, and human populations. Mitigation measures specifically address potential impacts to subsistence access and harvesting.

The proposed NU includes State leases and leases issued by CIRI that may have different environmental protection provisions. Article 8.2 of the Agreement requires a Unit Plan of Operations be consistent with the leases, mitigation measures, and lessee advisories developed by DNR for the State's most recent Cook Inlet areawide lease sale. Approval of the Application and future operations within the NU will be subject to this provision. When the unit operator submits a Unit Plan of Operations for approval, the Division will apply the current mitigation measures developed during the leasing process uniformly across the unit, ensuring environmental protections that might not otherwise occur on private lands. Unitization does not waive or reduce the effectiveness of the mitigating measures that condition the lessee's right to conduct operations on these leases.

Most of the proposed NU is within the Alaska Coastal Zone, and therefore it is subject to the ACMP and applicable KPB district plan, whether the activity is on State or CIRI land. The appropriate federal, State and local agencies must determine if the operator's exploration or development plan is consistent with ACMP, and the lessees may not commence drilling or development operations until all agencies have granted the required permits.

The Director's approval of a unit agreement is an administrative action, which by itself does not convey any authority to conduct operations on unitized leases. Unitization and approval of a Unit Plan of Exploration does not authorize any physical activity, but the Division will review a proposed Unit Plan of Operations to ensure that it is consistent with the approved Unit Plan of Exploration or Development. The unit operator must obtain the Division's approval of a Unit Plan of Operations, which provides a more detailed plan for surface activities incident to exploration than the Plan of Exploration. It must also obtain permits from state and federal agencies before proceeding with exploration of the unit area. Any new exploration or development activity that may occur following unitization, unless categorically approved under the ACMP ABC (General

Concurrence) list, will be subject to an ACMP consistency determination, and must comply with state and local ordinances, including DNR Area Plans and the local KPB district plan.

When reviewing a proposed Unit Plan of Operations, if the State owns the subsurface but does not own the surface, the Division considers the unit operator's ability to compensate the surface owner for damage sustained to the surface estate and plans for restoration and rehabilitation of the unit area. In addition, DNR, DEC, and AOGCC have bonding and financial responsibility requirements to ensure performance by the operator and reclamation of the area. 11 AAC 96.060; 18 AAC 75; 20 AAC 25.025. Unocal must clean up all well site locations in conformance with AOGCC regulation 11 AAC 25.170, and under the terms of the lease, the site must be rehabilitated to the satisfaction of the Commissioner.

Unitization allows the unit operator to explore and develop hydrocarbon resources under a single unit plan rather than on a lease-by-lease basis. Without unitization, the lease provisions would compel the lessees to seek permits to explore and develop each individual lease. The proliferation of surface activity and the duplication of production, gathering, and processing facilities would increase the potential for environmental damage. Unitization reduces both the number of facilities required to develop reserves and the aerial extent of land required to accommodate those facilities. Unitized exploration, development, and production minimize surface impacts by consolidating facilities, optimizing drilling operations, and reducing overall activity in the environment.

The lessee's compliance with conservation orders and field pool rules issued by the AOGCC would mitigate some of the surface impacts without an agreement to unitize operations. Still, unitization is the most efficient method for maximizing oil and gas recovery, while minimizing negative impacts on other resources. After unitization, the unit operator can design and locate facilities to maximize recovery and to minimize environmental impacts, without regard to lease boundaries. Review and approval of exploration and development plans under a unit agreement will also ensure that the unit operator makes rational surface-use decisions without regard for individual lease ownership or expense.

The environmental impacts of exploring and developing the subject leases would be greater without unitization. If exploration is successful, the unit operator will consolidate facilities and space gas wells as close together as possible to minimize environmental impacts of development. Future exploration and development may also use existing logging roads. Additionally, Unocal expects to develop this proposed unit in concert with unitized exploration and development of other known and potential natural gas resources on the Kenai Peninsula via a common carrier pipeline, which will allow for further consolidation of facilities and pipelines. Consequently, the benefits of consolidated exploration and development, application of the State's areawide mitigation measures, and the use of existing roads, balance the potential costs to the surrounding environment.

Unitization minimizes the environmental impacts and costs of exploration and development of the unit area, which meets the section .303(b)(1) criteria and supports approval of the Application.

2. The Geological and Engineering Characteristics of the Reservoir

The Division received the following technical data in support of the Application: a history of oil and gas exploration in the area, Unocal's geological justification for the formation of the unit, annotated well logs, representative strike and dip seismic cross sections across the North Fork anticline structure, a structure-contour map on the top of the Tyonek Formation, and a structure-contour map on the top of the Hemlock Conglomerate. Division staff evaluated the data provided by the unit operator and data otherwise available to them, and determined that the NU area encompasses all or part of one or more potential hydrocarbon accumulations, fulfilling the regulatory requirement in 11 AAC 83.356(a).

Cook Inlet area-wide geology maps from the 1960s and 1970s identify the anticlinal trend that is the basis of the proposed NU. The North Fork and Ninilchik Dome anticlines are the main structural features in the proposed unit area and comprise, at least in part, the areas of Exploration Block I and Exploration Block III (as described at the end of Attachment 4 and shown on Attachment 3 to this document). Exploration Block II comprises a part of the northeast extension of the North Fork anticline and a part of the southwest extension of the Ninilchik Dome anticline.

The North Fork anticline is a doubly plunging anticline striking northeast-southwest. The structure is approximately three miles wide and twelve miles long, including the North Fork Unit area. A structural saddle and cross faults separate the NU area from the anticline's southeast extension through the North Fork gas field. The North Fork anticline has a steeply dipping limb to the northwest and a complex of high-angle down-to-the-east reverse faults along the southeast side. A syncline separates the North Fork anticline from the parallel-trending Happy Valley and Deep Creek anticlines to the northwest of the unit area. Numerous high-angle faults cut across the main North Fork anticline perpendicular to the structural axis dividing the structure into several horst and graben sub-structures that constitute several aerially separate reservoir targets within the unit.

Southeast of the bounding reverse fault on the southeast side of the North Fork anticline, are a series of "stair step" fault blocks, the first of which is the Ninilchik Dome anticline. The Ninilchik Dome anticline is an en echelon structural high.

Unocal identified three potential hydrocarbon accumulations, or prospects, within the proposed unit area, Exploration Block I, II, and III. The Initial POE describes each Exploration Block and outlines Unocal's plans to explore them. The operator's primary exploration target is gas in Tyonek Formation sandstone of all three blocks in the unit area. However, Unocal also plans to explore for oil in the Hemlock Conglomerate by drilling and collecting well logs into that formation in at least Exploration Block I.

The Division cannot discuss the details of the confidential data, but the well and geophysical data provided with the Application, and otherwise available to DNR, indicate that the potential for hydrocarbons within the proposed unit area is sufficient to qualify for unitization, and unitized development and production of any underlying gas reservoirs is appropriate.

The State's evaluation of the subsurface geology supports the formation of the NU to include the lands described in Exhibit A and depicted in Exhibit B to the Agreement (Attachments 1 and 2 to this decision, respectively). The geological and engineering characteristics of the proposed NU area meet the criteria in section .303(b)(2) and support approval of the Application.

3. Prior Exploration Activities in the Unit Area

Even though 2-D seismic data has been acquired across portions of the unit area, no successful oil or gas wells have been drilled in the unit area.

The industry recognized the structure as a potential exploration target in the early 1960s, and mapped the subsurface with seismic, gravity, and magnetic tools that were available at the time. In 1965, Standard Oil of California (SOCAL) drilled the SOCAL North Fork Unit #41-35 (SNF 41-35) well, which was the first well drilled to test this anticlinal trend (see Table 1). This well is the certified gas well that holds the North Fork Unit and was drilled on the federal lease AK 24363. SOCAL's primary exploration objective in the SNF 41-35 well was oil in the Hemlock Conglomerate. SOCAL initially drilled SNF 41-35 to a total depth of 12,812 feet and initial production tests recovered minor amounts of 30° API oil from the Hemlock, but commercial quantities of oil were not present and SOCAL plugged the well back to the Tyonek. Tests of the SNF 41-35 well in the Tyonek gas sands indicated significant gas flow potential. The SNF 41-35, SOCAL well is a shut-in gas well.

In 1970, SOCAL drilled the SOCAL North Fork Unit #11-4 (SNF 11-4) well approximately six miles northeast of SNF 41-35, to a total depth of 12,462 feet MD. The well is located in proposed NU Tract 6. SOCAL collected oil stained core from the SNF 11-4 and noted good gas shows but the Hemlock reservoir looked thinner than at the SNF 41-35, and SOCAL plugged and abandoned the well as a dry hole.

Tyonek Formation gas accumulations are present in the Deep Creek and North Fork Units. In addition, the Cosmopolitan Unit, located southeast of the proposed NU has a proven oil accumulation, indicating an active petroleum system in the area.

Table 1. Wells Drilled on the North Fork Anticlinal Trend					
Operator	Well Name & No.	Year Drilled	Status	Location	API Number
SOCAL	North Fork Unit #41-35	1965	Dev	35-T4S-R13W SM	502311000400
SOCAL	North Fork Unit #11-4	1970	P&A	04-T4S-R13W SM	502312000200

Technology (primarily drilling technology, well log analysis, and seismic acquisition and processing) has evolved greatly since these early wells were drilled on the southern Kenai Peninsula. Unocal is using advanced technology in its Cook Inlet exploration. With new seismic data and improved well log analysis tools, Unocal believes that it has a greater ability to identify and refine potential oil and gas exploration prospects within the Tyonek and Hemlock formations.

In the past few years, Unocal used new seismic log analysis technology to re-examine the well data discussed above and seismic data acquired before 1980, to evaluate natural gas potential in the area. No one has collected seismic data in this area recently.

Based on the history of the area and the data presented by Unocal, the presence of hydrocarbons in the proposed unit area is prospective, but relatively unproven. This is especially true of the northeastern portion of the proposed NU. While Unocal justified the size of the NU based on the technical data and the Initial POE, additional exploration commitments will be necessary to maintain the entire unit area.

The exploration data provided with the Application and otherwise available to DNR supports inclusion of the proposed acreage in the NU. Therefore, the prior exploration activities fulfill the criteria in section .303(b)(2) and support approval of the Application.

4. Plans for Exploration and Development of the Proposed Unit Area

The unit operator must provide plans for exploration or development that justify including the proposed acreage in the unit area. 11 AAC 83.306(1). A Unit Plan of Exploration must include a description of proposed exploration activities, including the bottom-hole locations and depths of proposed wells, and the estimated date drilling will commence. 11 AAC 83.341(a).

The Initial POE is attached to this Decision (Attachment 4). It sets out a timely sequence of exploration activities that will facilitate the ultimate development and production of the reservoir, if Unocal discovers gas in commercial quantities. Furthermore, completion of the proposed exploration activities as scheduled during the three-year initial term will satisfy the performance standards and diligence requirements that the State and Unocal agreed to as a condition for approval of the Agreement. The Division and Unocal have agreed that a failure to timely perform the various components set out in the Initial POE would constitute a default under the Agreement.

The Initial POE protects the interests of the public and the State by committing Unocal to drill wells and acquire seismic data within the unit area. The Initial POE, with the agreed-to terms and conditions, ensures that the lease extensions resulting from unitization under 11 AAC 83.336 continue only so long as the applicants proceed diligently with exploration and development of the unit area. Therefore, the plans for exploration of the proposed unit area justify approval of the Application under the section .303(b)(4) criteria.

5. The Economic Costs and Benefits to the State

Approval of the Agreement, which includes the Initial POE, will result in both short-term and long-term economic benefits to the State. Assessment of the hydrocarbon potential within the unit will create jobs in the short-term. If the working interest owners make a commercial discovery, develop and begin production from the NU, the State will earn royalty and tax revenues over the long-term life of the field. If Unocal does not fulfill its obligations as stated in the Initial POE, payments will be due to defer the short term loss of potential bonus payments.

The primary term of several State leases in the proposed unit area will expire on January 31, 2004, unless extended by unitization. If the leases expire, the leasehold interests will return to the State. Under the current Oil and Gas Lease Sale Schedule, DNR would reoffer the land in the May 2004 sale. If the lands were leased in the 2004 sale, the State would receive bonus payments and rentals for the primary term of the new leases. However, even if this occurred and the new lessee proposed exploration of the area during the primary term, it could be years before the State would receive royalties and taxes on any commercial production. The potential long-term economic benefit of exploration and earlier development of the NU area outweighs the short-term loss of potential bonus payments.

Unocal holds 100% working interest ownership in the oil and gas leases in the proposed NU and in the Deep Creek Unit to the west. Drilling is underway at several locations along the Sterling Highway to prove up gas supply to meet future Cook Inlet demand.

If successful, Unocal plans to connect these potential new sources. Enstar plans to deliver natural gas to communities along the highway and to supply residential and industrial needs in the Cook Inlet basin.

The benefits of an increased property tax base for the Kenai Peninsula Borough and reduced energy costs for residents and businesses would be significant to these communities. Additional supply and deliverability of Cook Inlet gas to existing users may keep regional energy prices stable. NU development may increase and extend the State's income stream with new production taxes and royalties. Royalties and severance taxes benefit the local and state economy, and provide revenue to the State's general, school, and permanent funds. Unocal will most likely reinvest revenues in new exploration and development in the State or otherwise improve the quality of life in the region. Development of the NU would also increase demand for goods and services supplied by local businesses, retailers, and service providers.

In summary, the economic benefits outweigh the costs of unitization. Unocal has made meaningful commitments to explore the unit area, and if they are successful, the State will receive taxes, royalties, and increased economic activity. Moreover, the discovery of additional gas reserves in Cook Inlet may help to maintain stable, energy supplies for the entire area. Therefore, DNR's evaluation of the section .303(b)(5) economic criteria supports approval of the Application.

IV. FINDINGS

The Application, meets the criteria in 11 AAC 83.303(a) as discussed below.

1. Promote the Conservation of All Natural Resources

The Agreement will promote the conservation of both surface and subsurface resources through unitized (rather than lease-by-lease) development. Without the Agreement, the lease contracts would compel the lessees to seek permits to drill wells on each individual lease. Unitization reduces both the number of facilities required to explore for and develop reserves and the aerial extent or the footprint required to accommodate those facilities.

After unitization, the unit operator can design and locate facilities to maximize recovery and minimize environmental impacts, without regard to lease boundaries. Although Unocal has not determined the extent of any gas contained in the unit area, the Agreement will ensure that the lessees explore the acreage and maximize the recovery of reserves from the leases if they discover a commercial hydrocarbon accumulation.

The unitized exploration and development of the proposed unit area will reduce the amount of land, fish, and wildlife habitat that would otherwise be disrupted by individual lease development. The Application will conserve natural resources, including hydrocarbons, gravel, sand, water, wetlands, and other valuable habitat. This reduction in environmental impacts and preservation of existing uses is in the public interest.

If the exploration activities result in the discovery of a commercial reservoir, there will be environmental impacts associated with reservoir development. However, all unit development must proceed according to an approved Unit Plan of Development. Additionally, before undertaking any specific operations on State land, the Division must approve a Unit Plan of Operations. DNR will condition its approval of a Unit Plan of Operations and other permits on performance of the mitigation measures developed for the most recent Cook Inlet Areawide lease sale in addition to those in the leases. Compliance with mitigation measures will minimize, reduce or avoid adverse natural resource impacts.

2. Promote the Prevention of Economic and Physical Waste

The unit will prevent economic and physical waste because there is an approved exploration plan, and if Unocal makes a commercial discovery, the State and Unocal will evaluate and approve a comprehensive reservoir depletion plan. A cost-sharing agreement promotes efficient development of common surface facilities and operating strategies. If Unocal were to divest part of its interest and resign as unit operator, the new working interest owners in the unit could still rationally decide well spacing requirements, injection plans, and the proper joint-use of surface facilities. Unitization prevents economic and physical waste by eliminating redundant expenditures for a given level of production, and by avoiding loss of ultimate recovery with the adoption of a unified reservoir management plan.

The concern of lessees competing for oil and gas is less evident in the proposed NU where Unocal is the only lessee in the unit area. However, the fact that there are two royalty owners also weighs in favor of the formation of a unit. One of the CIRI leases has a higher royalty rate than the State leases, but CIRI would have more latitude to renegotiate economic terms and environmental provisions than the State. The State must ensure that the working interest owners do not concentrate exploration on the CIRI leases to the exclusion of the State acreage in the unit area. Formation of the NU and approval of the Initial POE will ensure that Unocal prudently and reasonably explores and develops all potential reservoirs within the unit area.

The total cost of exploring and developing the NU leases would be higher on a lease-by-lease basis than it would be under unitization. Unitized operations improve development of reservoirs beneath leases that may have variable or unknown productivity. Marginally economic reserves,

which otherwise would not be produced on a lease-by-lease basis, can be produced through unitized operations in combination with more productive leases. Facility consolidation lowers capital costs and promotes optimal reservoir management. Pressure maintenance and secondary recovery procedures are easier to design and achieve through joint, unitized efforts than would otherwise be possible. In combination, these factors allow the unit operator to develop and produce less profitable areas of a reservoir in the interest of all parties, including the State.

Unitization reduces the need for numerous exploration and development sites and thus minimizes drilling and facility investment costs. The unit operator can select locations for individual wells and surface facilities that optimize ultimate oil and gas recovery, while minimizing or avoiding adverse impacts to the environment.

Unitization allows pooling of capital so that the working interest owners can share the exploration and development risks. Reducing costs and environmental impact through unitized operations will expedite development of any reserves discovered and will promote greater ultimate recovery of oil and gas from the unit area. This may increase and extend the State's income stream from production taxes and royalties. The lessees may reinvest revenues in new exploration and development in the State. Unitization means lower financing costs and increased benefits to all interested parties. It benefits the local and state economy, and may provide production-based revenues to the State's general, school, and permanent funds.

3. Provide for the Protection of All Parties in Interest, Including the State

Alliance and Unocal provided evidence of reasonable effort to obtain joinder of all proper parties to the Agreement, and the Division complied with the public notice requirements of 11 AAC 83.311.

Unocal holds sufficient interest in the unit area to give reasonably effective control of operations. The Agreement, with the Initial POE and the agreed-to terms and conditions outlined within this decision, adequately and equitably protects the public interest, and promotes the State's interests because exploration will likely occur earlier than without unitization. Diligent exploration under a single approved unit plan without the complications of competing operators is in the State's best interest. It advances evaluation of the State's petroleum resources, while minimizing impacts to the region's cultural and environmental resources. A commercial discovery will stimulate the State's economy with production-based revenue, oil and gas related jobs, and service industry activity.

Formation of the NU protects the economic interests of the working interest owners and royalty owners of a common reservoir. Under the Agreement and Operating Agreement, each working interest owner has an equitable allocation of costs and revenues commensurate with the value of their leases.

The Agreement will not diminish access to public and navigable waters beyond those limitations (if any) imposed by law or already contained in the oil and gas leases covered by this Agreement. The Agreement provides for future expansions and contractions of the unit area, as warranted by

data obtained by exploration or otherwise. The Agreement thereby protects the public interest, the rights of the parties, and the correlative rights of adjacent landowners.

The Agreement provisions and State law provide for notice and an opportunity to be heard if the lessee disagrees with a State unit administration decision.

As discussed above, I find that the Agreement will promote the conservation of all natural resources, promote the prevention of economic and physical waste, and provide for the protection of all parties in interest including the State. The Application adequately and equitably protects the public interest, is in the State's best interest, and it meets the requirements of AS 38.05.180(p) and 11 AAC 83.303.

V. DECISION

- 1) For the reasons discussed above, I hereby approve the NU Application subject to the conditions specified herein. Unocal submitted a final version of the Agreement on December 8, 2003. The three-year term of the Agreement and the Initial POE become effective as of 12:01 a.m. on the day following approval by the Director.
- 2) Exhibit A to the Agreement (Attachment 2) lists the leases and the legal description of the acreage committed to the Unit. In order to justify the work commitments and the proposed unit area, the State and Unocal agreed to the following lease segregations and lease term modifications.
 - a. **Tract 1** -- A portion of ADL 388199 is committed to the proposed unit area as NU Tract 1. The non-unitized acreage within, T3S, R13W, SM, AK Section 3 lots 1-4, S2N2, SW4 and all of Section 4 is severed from ADL 388199. The non-unitized acreage within ADL 388199 is due to expire effective January 31, 2004, the end of the primary term. NU Tract 1 lies partially within Exploration Block II and Exploration Block III, as shown in Attachment 3 to this document and described at the end of Attachment 4 to this document. Should Exploration Block II or Exploration Block III contract out of the Unit under the terms of the Initial POE, NU Tract 1 will be severed and the working interest owners shall relinquish the non-unitized acreage to the State. For this specific action, the working interest owners waive the provisions of the Agreement and Regulations that do not provide for severance when a portion of the lease is contracted out of a unit.
 - b. **Tract 2** -- ADL 388196, which is committed to the unit in its entirety as NU Tract 2, lies with Exploration Block II.
 - c. **Tract 3 and Tract 11** -- ADL 388200, is segregated into two leases with both committed to the unit as NU Tract 3 and NU Tract 11.
 - i. Tract 3 - The eastern portion of ADL 388200, designated NU Tract 3 (T3S, R13W, SM, AK Sections 25, 26, 35 and 36) will retain the original lease number. The eastern half of NU Tract 3 lies within Exploration Block II and the western half within Exploration Block III.

- ii. Should Exploration Block II or Exploration Block III contract out of the unit under the terms of the Initial POE, NU Tract 3 will be severed and the working interest owners shall relinquish the non-unitized acreage to the State. For this specific action, the working interest owners waive the provisions of the Agreement and Regulations that do not provide for severance when a portion of a lease is contracted out of a unit.
- iii. DNR will assign a new lease number to the western portion of ADL 388200, designated NU Tract 11 (T3S, R13W, SM, AK Sections 27, 33 and 34), which is now a separate and distinct lease having the same effective date and term as the original lease and may be maintained thereafter only in accordance with the terms and conditions of the lease, the Agreement, statutes, and regulations. NU Tract 11 lies entirely within Exploration Block III.
- d. **Tract 4** -- A portion of ADL 388198 is committed to the proposed unit area as NU Tract 4, and the lease is severed. The non-unitized acreage within T3S, R12W, SM, AK Sections 28 and 33, is severed from ADL 388198, and will expire effective January 31, 2004, the end of the primary term.
- e. **Tract 5** -- ADL 389227, which is committed to the unit in its entirety as NU Tract 5, lies with Exploration Block I
- f. **Tract 6 and Tract 8** -- ADL 388209 is a noncontiguous lease, which is partially committed to the proposed unit as NU Tract 6 and NU Tract 8, both within Exploration Block I. The non-unitized acreage is severed out of ADL 388209, and the unitized acreage is segregated into two leases.
 - i. Non-Unitized - The non-unitized acreage severed out of ADL 388209 is described as follows: T4S, R13W, SM, AK Section 20, Surveyed, Fractional, SE4SE4, 40.00 Acres; Section 21, All; Section 28, All; Section 29, All; Section 31, S2SE4, E2E2NW4, Alaska State Land Survey 78-94 as shown on Plat No. 79-7 Homer Recording District, 156.79 Acres. The non-unitized, severed acreage is due to expire effective January 31, 2004, the end of the primary term.
 - ii. Tract 8 - The acreage that retains the original lease number, ADL 388209, is partially committed to the unit as NU Tract 8. NU Tract 8 is described as follows: T4S, R13W, SM, AK Section 6: Lots 3-7, E2SW/4, SE/4NW/4 and Section 7: Lots 1-4, E/2W/2.
 - iii. Tract 6 - The unitized acreage that is segregated out of ADL 388209 is a new lease committed to the unit as NU Tract 6. NU Tract 6 is described as follows: T4S, R13W, SM, AK Sections 4, 9 and 16. DNR will assign a new lease number to the acreage within Tract 6, which is now a separate and distinct lease having the same effective date and term as the original lease and may be maintained thereafter only in accordance with the terms and conditions of the lease, the Agreement, statutes, and regulations.
- g. **Tract 7** -- ADL 2095 lies partially within the North Fork Unit, and a portion that isn't committed to the North Fork Unit within T4S, R13W, SM, AK Section 8, is now segregated from ADL 2095 and committed to the proposed unit as NU Tract 7.

- i. DNR will assign a new lease number to the acreage within Tract 7, which is a separate and distinct lease having the same effective date and term as the original lease and may be maintained thereafter only in accordance with the terms and conditions of the lease, the Agreement, statutes, and regulations. The working interest owners agreed to permanently amend the terms of the Tract 7 lease (lease form DL-2) to conform with the provisions in the State's current lease form (DOG 200204) as follows:

Delete the following items from lease form DL-2

1. Delete Paragraph 2 (Definitions)
2. Delete Paragraph 11 (Rental)
3. Delete Paragraph 12 (Minimum Royalty)
4. Delete Paragraph 14 (Discovery Royalty)
5. Delete Paragraph 16 (RIK)
6. Delete Paragraph 17 (RIV)
7. Delete Paragraph 18 (Price)
8. Delete Paragraph 28 (Bonds)
9. Delete Paragraph 38 (Termination)
10. Delete Paragraph 43 (Regulations)
11. Delete Paragraph 45 (Notices)

Add the following paragraphs from lease form DOG 200204:

1. Paragraph 5 (Rentals)
2. Paragraph 7 (Apportionment of Royalty)
3. Paragraph 9 (Plan of Operations)
4. Paragraph 10 (POD)
5. Paragraph 11 (Information)
6. Paragraph 12 (Directional Drilling)
7. Paragraph 21 (Rights upon Termination)
8. Paragraph 23 (Bonds)
9. Paragraph 25 (Notices)
10. Paragraph 26 (Regulations)
11. Paragraph 34 (Definitions)
12. Paragraph 36 (Value)
13. Paragraph 37 (RIV)
14. Paragraph 38 (RIK).

- ii. In addition, the fact that a portion of ADL 2095, which is not committed to the NU, is committed to the North Fork Unit will not extend the primary term of the new lease. Any action on ADL 2095, outside of the NU; including, but not limited to, unitization, pooling, suspension, and well certification; will not affect the new lease within NU Tract 7. If the NU terminates, or the new lease contracts out of the unit, the working interest owners shall relinquish the non-unitized the acreage to the State.

- h. **Tract 9 and Tract 10** – CIRI leases C-373303 and C-0614, NU Tracts 9 and 10 respectively, lie within Exploration Block I.

3. The lessee waives the extension provisions of 11 AAC 83.140 and Article 15.2 of the Agreement and the notice and hearing provisions of 11 AAC 83.374 applicable to default, contraction, and termination of the NU.
4. Within 60 days of the notification of the new ADL numbers for the segregated leases created by this decision, the Unit Operator shall submit to the State updated Exhibits A and B to the Agreement reflecting the new lease numbers.
5. In accordance with Article 8.1.1 of the Agreement and 11 AAC 83.341, an annual status report is due on each anniversary of the effective date of the NU. The annual status report must describe the status of projects undertaken and the work completed during that year of the Initial POE, as well as any proposed changes to the plan.
6. The unit operator must submit a Second Plan of Exploration to the Commissioner at least 60 days before the Initial POE expires. Alternatively, the unit operator shall request approval of the first Plan of Development, if appropriate, at least 90 days before the Initial POE expires. 11 AAC 83.341(b) and .343(c).

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d) and may be mailed or delivered to Thomas E. Irwin, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918, or sent by electronic mail to dnr_appeals@dnr.state.ak.us. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.



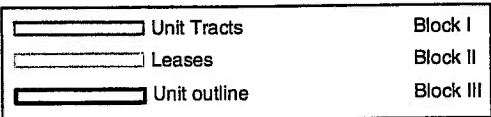
Mark D. Myers, Director
Division of Oil and Gas

1-29-04
Date

- Attachments:
1. The Nikolaevsk Unit Agreement
 2. Exhibit A, Tract Description and Ownership Schedule
 3. Exhibit B, Map of the Nikolaevsk Unit Boundary and Exploration Blocks
 4. Exhibit ~~E~~₉, Plan of Exploration

RECEIVED
FEB 4 2004

DIVISION OF OIL AND GAS



FEBRUARY 1, 2004
SCALE: 1:78,000

Exhibit G to the Nikolaevsk Unit Agreement: Initial Plan of Exploration

For the period from January 31, 2004 through January 31, 2007

Exploration Blocks I, II, and III are described as follows:

Block I: T4S, R13W, SM, AK, Sections 4-9 and 16-18

Block II: T3S, R12W, SM, AK, Sections 17-20 and 29-32
T3S, R13W, SM, AK, Sections 13, 24, 25, and 36

Block III: T3S, R13W, SM, AK, Sections 23, 26, 27, and 33-35

Year One:

1. During the first year of this Initial Plan of Exploration (POE), the Nikolaevsk Unit (NU) Operator shall drill an exploration well in Exploration Block I, to a depth of at least 10,500 ft. tvd or a depth sufficient to penetrate 200' of the Hemlock Formation, whichever is less, with a bottom hole location within Section 8 of T4SR13W (ADL 02095). The Unit Operator shall log the well (GR or SP, Resistivity and Neutron/Density or Porosity: appropriate triple combo log) through the Hemlock Formation. In the event that a commercial discovery or mechanical problem occurs prior to reaching the target depth, the unit operator shall submit a revised POE for approval by the Director.
2. Failure to fulfill the Exploration Block I drilling requirement or approval of a revised POE, as described above, will result in the automatic termination of the NU effective January 31, 2005, and a payment of \$50,000 to the State of Alaska.
3. On or before January 31, 2005, the Working Interest Owners may elect to terminate the NU, pay \$50,000 to the State of Alaska, and be released from the remaining obligations in this POE.
4. On or before January 31, 2005, the Working Interest Owners may elect to contract the acreage within Exploration Block II and Exploration Block III out of the Unit Area, pay the State of Alaska \$50,000, and submit an amended POE or a Plan of Development for the revised unit area to the Division for approval.
5. ADL 388209 will be segregated so that, Tract 6 and Tract 8 are individual leases.
6. ADL 388200 will be segregated into two leases, so that T3S R13W Sections 25, 26, 35, and 36 are one lease and T3S R13W sections 27, 33, and 34 are another lease.

Year Two:

1. Unless the Exploration Blocks contracted out of the Unit in Year One, by January 31, 2006 the NU Operator shall acquire, process and interpret a sum total of 10 miles of new 2-D Seismic lines within Exploration Block II and Exploration Block III to delineate the prospects shown in the confidential data.

2. Failure to complete the seismic program in either Exploration Block II or Block III will result in the automatic contraction of the acreage within that Block out of the NU effective January 31, 2006, and a payment to the State of Alaska for the contraction acreage (\$70,000 for Exploration Block II and \$30,000 for Exploration Block III).
3. Unless the Exploration Blocks contracted out of the Unit in Year One, by January 31, 2006 the Unit Operator shall commit to drill an exploration well in Exploration Block II during the third year of this POE. The Unit Operator shall submit a written plan that identifies the proposed bottom hole location, depth, and testing plan for the Exploration Block II well.
4. Failure to submit the written commitment to drill a well in Exploration Block II will result in automatic contraction of the Exploration Block II leases out of the NU Area, and the Unit Operator shall submit an amended POE or a Plan of Development for the remaining unit area to the Division for approval.
5. Between February 1, 2005 and January 31, 2006, the Working Interest Owners may elect to voluntarily terminate the NU, pay \$100,000 to the State of Alaska, and be released from the remaining obligations in this POE.
6. Unless the Exploration Blocks previously contracted out of the Unit, between February 1, 2005 and January 31, 2006 the Working Interest Owners may elect to contract the acreage within Exploration Block II and/or Exploration Block III out of the Unit Area, pay the State of Alaska for the contraction acreage (\$70,000 for Exploration Block II and \$30,000 for Exploration Block III), and submit an amended POE or Plan of Development for the remaining unit area to the Division for approval.

Year Three:

1. Unless Exploration Block II previously contracted out of the unit area, during the third year of this POE the Unit Operator shall drill an exploration well in Exploration Block II to a depth of at least 9,500 ft. tvd. The Unit Operator shall log the well (GR or SP, Resistivity and Neutron/Density or Porosity: appropriate triple combo log). In the event that a commercial discovery or mechanical problem occurs prior to reaching the target depth, the unit operator shall consult with the Director of the Division of Oil and Gas, who may require the operator to submit a revised POE for approval.
2. Failure to fulfill the Exploration Block II drilling requirement, as described in the paragraph immediately above, will result in the automatic contraction of the acreage within Exploration Block II out of the NU effective January 31, 2007, a payment of \$200,000 to the State of Alaska, and the Unit Operator shall submit an amended POE or a Plan of Development for the revised unit area to the Division for approval.
3. Fulfilling the Exploration Block II drilling requirement during the second year of this POE will relieve the Working Interest Owners of the Exploration Block II seismic

requirement in Year Two. However, the Unit Operator shall submit an amended POE or Plan of Development for the revised unit area to the Division for approval.

4. Between February 1, 2006 and January 31, 2007, the Working Interest Owners may elect to voluntarily terminate the NU, pay \$300,000 to the State of Alaska, and be released from the remaining obligations in this POE.
5. Between February 1, 2006 and January 31, 2007, the Working Interest Owners may elect to contract the acreage within either Exploration Block II or Exploration Block III, or both blocks out of the Unit Area, pay the State of Alaska for the contraction acreage (\$200,000 for Exploration Block II, \$100,000 for Exploration Block III), and submit an amended POE or a Plan of Development for the revised unit area to the Division for approval.
6. Failure to commit to further exploration of Exploration Block III in the Second Plan of Exploration will result in the automatic contraction of the acreage within Exploration Block III out of the NU effective January 31, 2007, a payment of \$100,000 to the State of Alaska
7. At anytime during the POE, if the acreage within Exploration Block II or Exploration Block III contracts out of the unit, ADL 388199 and ADL 388200 will be severed along the boundary between Exploration Block II and Exploration Block III.
8. If the NU terminates for failure to fulfill any of the commitments in this POE, the Working Interest Owners shall automatically surrender all leases within the Unit whose primary terms have expired, effective the day the Unit terminates.
9. If any acreage contracts out of the NU area under the terms of this POE, the Working Interest Owners shall automatically surrender the contracted acreage within leases whose primary terms have expired, effective the day the leases contract out of the unit.
10. The Working Interest Owners waive the extension provision of 11 AAC 83.140 and Article 15.2 of the NU Agreement, and the notice and hearing provisions of 11 AAC 83.374 applicable to default or termination of the NU.